

GOAL: SOUND SCIENCE, IMPROVED UNDERSTANDING OF ENV. RISK AND GREATER INNOVATION TO ADDRESS ENV. PROBLEMS

EPA will develop and apply the best available science for addressing current and future environmental hazards as well as new approaches toward improving environmental protection.

OBJECTIVE: CONDUCT RESEARCH FOR ECOSYSTEM ASSESSMENT AND RESTORATION.

Provide the scientific understanding to measure, model, maintain, and/or restore, at multiple spatial scales, the present and future integrity of highly valued ecosystems.

Annual Performance Goals and Measures

Research

Integrated Ecosystem Modeling

In 2002 Produce a report on trends in acid deposition and the acidity of lakes and streams to assess progress toward reducing the impacts of acid rain.

Performance Measures:

	FY 2002 Enacted	Units
Trends in acidity in lakes and streams in the NE and Mid Atlantic Regions of the U.S.	1	report

Baseline: In response to the Clean Air Act amendments, actions were taken to reduce the causes of acid deposition and aid in the recovery of lakes and streams affected by this deposition. Our understanding of the expected rate and degree of recovery has been primarily based on results of similar actions in northern Europe. Research is being conducted to evaluate the status of acidic lakes and streams in the northeastern United States, a region sensitive to and impacted by acid deposition, to evaluate the degree to which the actions taken have been effective. This research focuses on measuring the end result of controls in place and will provide insights into whether additional controls are needed.

OBJECTIVE: IMPROVE SCIENTIFIC BASIS TO MANAGE ENVIRONMENTAL HAZARDS AND EXPOSURES.

Improve the scientific basis to identify, characterize, assess, and manage environmental hazards and exposures that pose the greatest health risks to the American public by developing models and methodologies to integrate information about exposures and effects from multiple pathways. This effort includes focusing on risks faced by susceptible populations, such as people differentiated by life stage (e.g., children and the elderly) and ethnic/cultural background.

[Note: This document includes only those annual performance goals that will appear in the Annual Report. Progress toward strategic objectives without annual performance goals and measures listed here are tracked by additional goals and measures reported in Annual Plan and Budget documents.]

OBJECTIVE: ENHANCE CAPABILITIES TO RESPOND TO FUTURE ENVIRONMENTAL DEVELOPMENTS.

Enhance EPA's capabilities to anticipate, understand, and respond to future environmental development and conduct research in areas that combine human health and ecological considerations.

[Note: This document includes only those annual performance goals that will appear in the Annual Report. Progress toward strategic objectives without annual performance goals and measures listed here are tracked by additional goals and measures reported in Annual Plan and Budget documents.]

OBJECTIVE: IMPROVE ENVIRONMENTAL SYSTEMS MANAGEMENT.

Provide tools and technologies to improve environmental systems management while continuing to prevent and control pollution and reduce human health and ecological risks originating from multiple economic sectors.

Annual Performance Goals and Measures

Research

Pollution Prevention Tools and Methodologies

In 2002 Improve P2 tools for the industrial sector and other sectors by providing updated/new methods and approaches to help users simulate product, process or system redesign and evaluate resulting pollution levels, impacts and costs.

Performance Measures:

	FY 2002 Enacted	Units
Enhance the Waste Reduction Algorithm environmental impact assessment tool used to design or retrofit chemical processes with: (1) a better assessment methodology and (2) new features (costing).	1	method
Prepare a pest resistance management framework to prolong the effectiveness of genetically-modified corn pesticide characteristics for the Office of Pesticide Programs during product registration.	1	protocol
Provide a PC-based tool for use by EPA and the metal finishing sector in evaluating exposure and inhalation health risks to workers and residents living near metal finishing facilities.	1	risk tool

Baseline: Although pollution prevention is the preferred approach to protecting human health and the environment, implementation of preventive approaches is hampered by a lack of available information on comparative risks, effectiveness, and costs of alternatives. Current tools for evaluating proposed changes in products, processes, or system designs are focused on only a few sectors; limited in availability, ease of use, and application; and restricted in their capability to determine pollution levels, health and environmental impacts, and costs of the proposed changes. This research will produce a set of improved tools for the chemical, coatings, metal finishing and other sectors that will be widely available, easy to use, and applicable for evaluating alternative approaches and predicting results, at relatively low cost, prior to the investment of capital in these alternatives.

New Technologies

In 2002 Formalize generic testing protocols for technology performance verification, and provide additional performance verifications of pollution prevention, control and monitoring technologies in all environmental media.

Performance Measures:

	FY 2002 Enacted	Units
Complete 20 stakeholder approved and peer-reviewed test protocols in all environmental technology categories under ETV, and provide them to testing organizations world-wide.	20	protocols

Baseline: A significant hindrance to wider acceptance and implementation of pollution prevention is a shortage of cost-effective alternative technologies and processes. This is particularly true for some industrial sectors using or generating pollutants that pose significant health and environmental risks that are resistant to treatment, reduction, or elimination, such as chlorinated organic solvents and toxic metals. This research will create alternative technologies and processes for reducing or eliminating these pollutants in key industries.

Actual environmental risk reduction is directly related to performance and effectiveness of environmental technologies purchased and used. Private sector technology developers produce almost all of the new technologies purchased in the U.S. and around the world. Purchasers and permittees of environmental technologies need an independent, objective, high quality source of performance information in order to make more informed decisions; and vendors with innovative, improved, faster, and cheaper environmental technologies need a reliable source of independent evaluation to be able to penetrate the environmental technology market. Having completed a five-year pilot in 2001, the Environmental Technology Verification (ETV) Program will have delivered more than 100 test plans and protocols, making them available to the entire research and testing community, and will have verified approximately 150 technologies, making data on their performance available for public use as well.

OBJECTIVE: QUANTIFY ENVIRONMENTAL RESULTS OF PARTNERSHIP APPROACHES.

Increase partnership-based projects with counties, cities, states, tribes, resource conservation districts, and/or bioregions, bringing together needed external and internal stakeholders, and quantify the tangible and sustainable environmental results of integrated, holistic, partnership approaches.

[Note: This document includes only those annual performance goals that will appear in the Annual Report. Progress toward strategic objectives without annual performance goals and measures listed here are tracked by additional goals and measures reported in Annual Plan and Budget documents.]

OBJECTIVE: INCORPORATE INNOVATIVE APPROACHES.

Incorporate innovative approaches to environmental management into EPA programs, so that EPA and external partners achieve greater and more cost-effective public health and environmental protection.

[Note: This document includes only those annual performance goals that will appear in the Annual Report. Progress toward strategic objectives without annual performance goals and measures listed here are tracked by additional goals and measures reported in Annual Plan and Budget documents.]

OBJECTIVE: DEMONSTRATE REGIONAL CAPABILITY TO ASSIST ENVIRONMENTAL DECISION MAKING.

Demonstrate regional capability to assist environmental decision making by assessing environmental conditions and trends, health and ecological risks, and the environmental effectiveness of management action in priority geographic areas.

[Note: This document includes only those annual performance goals that will appear in the Annual Report. Progress toward strategic objectives without annual performance goals and measures listed here are tracked by additional goals and measures reported in Annual Plan and Budget documents.]

OBJECTIVE: CONDUCT PEER REVIEW TO IMPROVE AGENCY DECISIONS.

Conduct peer reviews and provide other guidance to improve the production and use of the science underlying Agency decisions.

[Note: This document includes only those annual performance goals that will appear in the Annual Report. Progress toward strategic objectives without annual performance goals and measures listed here are tracked by additional goals and measures reported in Annual Plan and Budget documents.]